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Notice of Allowability	Application No.	Applicant(s)	
	10/607,838	SUBRAMANIAN ET AL.	
	Examiner	Art Unit	
	Asok K. Sarkar	2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 11/29/2005.
2. ☒ The allowed claim(s) is/are 1-6, 9-23 and 45-50.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Response to Amendment

1. Applicant's explanation of the instant invention in pointing the difference with the cited prior art was found to be persuasive.

EXAMINER'S AMENDMENT

2. In view of the Applicant's election of Group I claims pertaining to method of fabrication of a device without traverse in response dated October 12, 2004, the Application was amended.
3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claims 24 – 44 were cancelled.

Allowable Subject Matter

4. Claims 1 – 6, 9 – 23 and 45 – 50 are now allowed.
5. The following is an examiner's statement of reasons for allowance:

Claims 1 – 6, 9 and 48 recite, inter alia, a method of forming two level structures in a semiconductor substrate, the method comprising the steps of forming lines of different widths having a first floor, oxidizing the lines until lines of thinner width are substantially fully oxidized and wider lines are not fully oxidized, etching the oxide to expose the first floor and etching the exposed first floor deeper into the substrate to

Art Unit: 2891

form a second floor. The art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Claims 10 – 15, 49 and 50 recite, inter alia, a method of forming multiple level structures in a semiconductor substrate, the method comprising the steps of forming structures in the substrate having different widths, oxidizing the structures until structures of a desired width are substantially fully oxidized and wider structures are not fully oxidized, etching the oxide to expose a floor of the substrate and etching the floor deeper into the substrate to form a next floor. The art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Claim 16 recites, inter alia, a method of forming multiple two level structures in a semiconductor substrate, the method comprising the steps of lithographically forming a pattern having structures of different widths, the structures extending up from a first floor of the substrate, oxidizing the structures on the substrate until lines of structures of a selected width are substantially fully oxidized and wider structure are not fully oxidized, CHF_3 reactive ion etching the oxide to expose the first floor; and selectively etching the first floor deeper into the substrate to form a second floor. The art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Claims 17 – 20 recite, inter alia, a method of forming a comb actuator in a semiconductor substrate, the method comprising the steps of forming pillars of alternating thick and thin widths extending from a first floor of the substrate, oxidizing the pillars until pillars of thin width are substantially fully oxidized and thicker lines are not fully oxidized, etching the oxide to expose the first floor, etching the first floor deeper into the substrate to form a second floor and releasing the comb actuator. The art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Claims 21 – 23 recite, inter alia, a method of forming two level structures in a semiconductor substrate, the method comprising the steps of forming lines of different widths having a first floor, oxidizing the lines until lines of thinner width are substantially fully oxidized and wider lines are not fully oxidized, etching the oxide to expose the first floor and etching the exposed first floor deeper into the substrate to form a second floor and releasing the lines to form the suspended structure. The art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Claims 45 – 47 recite, inter alia, a method of forming multiple two level structures in a semiconductor substrate, the method comprising the steps of lithographically forming a pattern having structures of different widths, the structures extending up from a first floor of the substrate, oxidizing the structures on the substrate until structures of a

Art Unit: 2891

selected width are substantially fully oxidized and wider patterns are not substantially fully oxidized, anisotropically etching the oxide to expose the first floor and selectively etching the first floor deeper into the substrate to form a second floor. The art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Conclusion

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asok K. Sarkar whose telephone number is 571 272 1970. The examiner can normally be reached on Monday - Friday (8 AM- 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William B. Baumeister can be reached on 571 272 1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2891

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Asok Kumar Sarkar

Asok K. Sarkar
December 12, 2005

Primary Examiner